

109TH CONGRESS
1ST SESSION

H. R. 250

To establish an interagency committee to coordinate Federal manufacturing research and development efforts in manufacturing, strengthen existing programs to assist manufacturing innovation and education, and expand outreach programs for small and medium-sized manufacturers, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JANUARY 6, 2005

Mr. EHLERS introduced the following bill; which was referred to the
Committee on Science

A BILL

To establish an interagency committee to coordinate Federal manufacturing research and development efforts in manufacturing, strengthen existing programs to assist manufacturing innovation and education, and expand outreach programs for small and medium-sized manufacturers, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Manufacturing Tech-
5 nology Competitiveness Act of 2005”.

1 **SEC. 2. INTERAGENCY COMMITTEE AND ADVISORY COM-**
2 **MITTEE.**

3 (a) INTERAGENCY COMMITTEE.—

4 (1) ESTABLISHMENT.—The President shall es-
5 tablish or designate an interagency committee on
6 manufacturing research and development, which
7 shall include representatives from the Office of
8 Science and Technology Policy, the National Insti-
9 tute of Standards and Technology, the Science and
10 Technology Directorate of the Department of Home-
11 land Security, the National Science Foundation, the
12 Department of Energy, and any other agency that
13 the President may designate. The Interagency Com-
14 mittee shall be chaired by the Under Secretary of
15 Commerce for Technology.

16 (2) FUNCTIONS.—The Interagency Committee
17 shall be responsible for the planning and coordina-
18 tion of Federal efforts in manufacturing research
19 and development through—

20 (A) establishing goals and priorities for
21 manufacturing research and development, in-
22 cluding the strengthening of United States
23 manufacturing through the support and coordi-
24 nation of Federal manufacturing research, de-
25 velopment, technology transfer, standards, and
26 technical training;

1 (B) developing, within 6 months after the
2 date of enactment of this Act, and updating
3 every 3 years for delivery with the President's
4 annual budget request to Congress, a strategic
5 plan, to be transmitted to the Committee on
6 Science of the House of Representatives and
7 the Committee on Commerce, Science, and
8 Transportation of the Senate, for manufac-
9 turing research and development that includes
10 an analysis of the research, development, tech-
11 nology transfer, standards, technical training,
12 and integration needs of the manufacturing sec-
13 tor important to ensuring and maintaining
14 United States competitiveness;

15 (C) proposing an annual coordinated inter-
16 agency budget for manufacturing research and
17 development to the Office of Management and
18 Budget; and

19 (D) developing and transmitting to Con-
20 gress an annual report on the Federal programs
21 involved in manufacturing research, develop-
22 ment, technical training, standards, and inte-
23 gration, their funding levels, and their impacts
24 on United States manufacturing competitive-
25 ness, including the identification and analysis of

1 the manufacturing research and development
2 problems that require additional attention, and
3 recommendations of how Federal programs
4 should address those problems.

5 (3) RECOMMENDATIONS AND VIEWS.—In car-
6 rying out its functions under paragraph (2), the
7 Interagency Committee shall consider the rec-
8 ommendations of the Advisory Committee and the
9 views of academic, State, industry, and other entities
10 involved in manufacturing research and develop-
11 ment.

12 (b) ADVISORY COMMITTEE.—

13 (1) ESTABLISHMENT.—Not later than 6
14 months after the date of enactment of this Act, the
15 President shall establish or designate an advisory
16 committee to provide advice and information to the
17 Interagency Committee.

18 (2) RECOMMENDATIONS.—The Advisory Com-
19 mittee shall assist the Interagency Committee by
20 providing it with recommendations on—

21 (A) the goals and priorities for manufac-
22 turing research and development;

23 (B) the strategic plan, including proposals
24 on how to strengthen research and development
25 to help manufacturing; and

1 (C) other issues it considers appropriate.

2 (3) REPORT.—The Advisory Committee shall
3 provide an annual report to the Interagency Com-
4 mittee and the Congress that shall assess—

5 (A) the progress made in implementing the
6 strategic plan and challenges to this progress;

7 (B) the effectiveness of activities under the
8 strategic plan in improving United States man-
9 ufacturing competitiveness;

10 (C) the need to revise the goals and prior-
11 ities established by the Interagency Committee;
12 and

13 (D) new and emerging problems and op-
14 portunities affecting the manufacturing re-
15 search community, research infrastructure, and
16 the measurement and statistical analysis of
17 manufacturing that may need to be considered
18 by the Interagency Committee.

19 (4) FEDERAL ADVISORY COMMITTEE ACT AP-
20 PPLICATION.—Section 14 of the Federal Advisory
21 Committee Act shall not apply to the Advisory Com-
22 mittee.

1 **SEC. 3. COLLABORATIVE MANUFACTURING RESEARCH**
 2 **PILOT GRANTS.**

3 The National Institute of Standards and Technology
 4 Act is amended—

5 (1) by redesignating the first section 32 as sec-
 6 tion 34 and moving it to the end of the Act; and

7 (2) by inserting before the section moved by
 8 paragraph (1) the following new section:

9 **“SEC. 33. COLLABORATIVE MANUFACTURING RESEARCH**
 10 **PILOT GRANTS.**

11 “(a) **AUTHORITY.**—

12 “(1) **ESTABLISHMENT.**—The Director shall es-
 13 tablish a pilot program of awards to partnerships
 14 among participants described in paragraph (2) for
 15 the purposes described in paragraph (3). Awards
 16 shall be made on a peer-reviewed, competitive basis.

17 “(2) **PARTICIPANTS.**—Such partnerships shall
 18 include at least—

19 “(A) 1 manufacturing industry partner;
 20 and

21 “(B) 1 nonindustry partner.

22 “(3) **PURPOSE.**—The purpose of the program
 23 under this section is to foster cost-shared collabora-
 24 tions among firms, educational institutions, research
 25 institutions, State agencies, and nonprofit organiza-
 26 tions to encourage the development of innovative,

1 multidisciplinary manufacturing technologies. Part-
2 nerships receiving awards under this section shall
3 conduct applied research to develop new manufac-
4 turing processes, techniques, or materials that would
5 contribute to improved performance, productivity,
6 and competitiveness of United States manufacturing,
7 and build lasting alliances among collaborators.

8 “(b) PROGRAM CONTRIBUTION.—Awards under this
9 section shall provide for not more than one-third of the
10 costs of a partnership. Not more than an additional one-
11 third of such costs may be obtained directly or indirectly
12 from other Federal sources.

13 “(c) APPLICATIONS.—Applications for awards under
14 this section shall be submitted in such manner, at such
15 time, and containing such information as the Director
16 shall require. Such applications shall describe at a min-
17 imum—

18 “(1) how each partner will participate in devel-
19 oping and carrying out the research agenda of the
20 partnership;

21 “(2) the research that the grant would fund;
22 and

23 “(3) how the research to be funded with the
24 award would contribute to improved performance,

1 productivity, and competitiveness of the United
2 States manufacturing industry.

3 “(d) SELECTION CRITERIA.—In selecting applica-
4 tions for awards under this section, the Director shall con-
5 sider at a minimum—

6 “(1) the degree to which projects will have a
7 broad impact on manufacturing;

8 “(2) the novelty and scientific and technical
9 merit of the proposed projects; and

10 “(3) the demonstrated capabilities of the appli-
11 cants to successfully carry out the proposed re-
12 search.

13 “(e) DISTRIBUTION.—In selecting applications under
14 this section the Director shall ensure, to the extent prac-
15 ticable, a distribution of overall awards among a variety
16 of manufacturing industry sectors and a range of firm
17 sizes.

18 “(f) DURATION.—In carrying out this section, the Di-
19 rector shall run a single pilot competition to solicit and
20 make awards. Each award shall be for a 3-year period.”.

21 **SEC. 4. MANUFACTURING FELLOWSHIP PROGRAM.**

22 Section 18 of the National Institute of Standards and
23 Technology Act (15 U.S.C. 278g–1) is amended—

24 (1) by inserting “(a) IN GENERAL.—” before

25 “The Director is authorized”; and

1 (2) by adding at the end the following new sub-
2 section:

3 “(b) MANUFACTURING FELLOWSHIP PROGRAM.—

4 “(1) ESTABLISHMENT.—To promote the devel-
5 opment of a robust research community working at
6 the leading edge of manufacturing sciences, the Di-
7 rector shall establish a program to award—

8 “(A) postdoctoral research fellowships at
9 the Institute for research activities related to
10 manufacturing sciences; and

11 “(B) senior research fellowships to estab-
12 lished researchers in industry or at institutions
13 of higher education who wish to pursue studies
14 related to the manufacturing sciences at the In-
15 stitute.

16 “(2) APPLICATIONS.—To be eligible for an
17 award under this subsection, an individual shall sub-
18 mit an application to the Director at such time, in
19 such manner, and containing such information as
20 the Director may require.

21 “(3) STIPEND LEVELS.—Under this section, the
22 Director shall provide stipends for postdoctoral re-
23 search fellowships at a level consistent with the Na-
24 tional Institute of Standards and Technology
25 Postdoctoral Research Fellowship Program, and sen-

ior research fellowships at levels consistent with support for a faculty member in a sabbatical position.”.

SEC. 5. MANUFACTURING EXTENSION.

(a) MANUFACTURING CENTER EVALUATION.—Section 25(c)(5) of the National Institute of Standards and Technology Act (15 U.S.C. 278k(c)(5)) is amended by inserting “A Center that has not received a positive evaluation by the evaluation panel shall be notified by the panel of the deficiencies in its performance and may be placed on probation for one year, after which time the panel may reevaluate the Center. If the Center has not addressed the deficiencies identified by the panel, or shown a significant improvement in its performance, the Director may conduct a new competition to select an operator for the Center or may close the Center.” after “sixth year at declining levels.”.

(b) MANUFACTURING EXTENSION CENTER COMPETITIVE GRANT PROGRAM.—Section 25 of the National Institute of Standards and Technology Act (15 U.S.C. 278k) is amended by adding at the end the following new subsections:

“(e) COMPETITIVE GRANT PROGRAM.—

“(1) ESTABLISHMENT.—The Director shall establish, within the Manufacturing Extension Partnership program under this section and section 26

1 of this Act, a program of competitive awards among
2 participants described in paragraph (2) for the pur-
3 poses described in paragraph (3).

4 “(2) PARTICIPANTS.—Participants receiving
5 awards under this subsection shall be the Centers, or
6 a consortium of such Centers.

7 “(3) PURPOSE.—The purpose of the program
8 under this subsection is to develop projects to solve
9 new or emerging manufacturing problems as deter-
10 mined by the Director, in consultation with the Di-
11 rector of the Manufacturing Extension Partnership
12 program, the Manufacturing Extension Partnership
13 National Advisory Board, and small and medium-
14 sized manufacturers. One or more themes for the
15 competition may be identified, which may vary from
16 year to year, depending on the needs of manufactur-
17 ers and the success of previous competitions. These
18 themes shall be related to projects associated with
19 manufacturing extension activities, including supply
20 chain integration and quality management, or extend
21 beyond these traditional areas.

22 “(4) APPLICATIONS.—Applications for awards
23 under this subsection shall be submitted in such
24 manner, at such time, and containing such informa-
25 tion as the Director shall require, in consultation

1 with the Manufacturing Extension Partnership Na-
2 tional Advisory Board.

3 “(5) SELECTION.—Awards under this sub-
4 section shall be peer reviewed and competitively
5 awarded. The Director shall select proposals to re-
6 ceive awards—

7 “(A) that utilize innovative or collaborative
8 approaches to solving the problem described in
9 the competition;

10 “(B) that will improve the competitiveness
11 of industries in the region in which the Center
12 or Centers are located; and

13 “(C) that will contribute to the long-term
14 economic stability of that region.

15 “(6) PROGRAM CONTRIBUTION.—Recipients of
16 awards under this subsection shall not be required
17 to provide a matching contribution.

18 “(f) AUDITS.—A center that receives assistance
19 under this section shall submit annual audits to the Sec-
20 retary in accordance with Office of Management and
21 Budget Circular A–133 and shall make such audits avail-
22 able to the public on request.”.

1 **SEC. 6. SCIENTIFIC AND TECHNICAL RESEARCH AND SERV-**
2 **ICES.**

3 (a) LABORATORY ACTIVITIES.—There are authorized
4 to be appropriated to the Secretary of Commerce for the
5 scientific and technical research and services laboratory
6 activities of the National Institute of Standards and Tech-
7 nology—

8 (1) \$425,688,000 for fiscal year 2006, of
9 which—

10 (A) \$55,777,000 shall be for Electronics
11 and Electrical Engineering;

12 (B) \$29,584,000 shall be for Manufac-
13 turing Engineering;

14 (C) \$50,142,000 shall be for Chemical
15 Science and Technology;

16 (D) \$42,240,000 shall be for Physics;

17 (E) \$62,724,000 shall be for Material
18 Science and Engineering;

19 (F) \$23,594,000 shall be for Building and
20 Fire Research;

21 (G) \$60,660,000 shall be for Computer
22 Science and Applied Mathematics, of which
23 \$2,800,000 shall be for activities in support of
24 the Help America Vote Act of 2002;

25 (H) \$17,445,000 shall be for Technical As-
26 sistance; and

1 (I) \$78,102,000 shall be for Research Sup-
2 port Activities;

3 (2) \$446,951,000 for fiscal year 2007;

4 (3) \$469,299,000 for fiscal year 2008; and

5 (4) \$492,764,000 for fiscal year 2009.

6 (b) MALCOLM BALDRIGE NATIONAL QUALITY
7 AWARD PROGRAM.—There are authorized to be appro-
8 priated to the Secretary of Commerce for the Malcolm
9 Baldrige National Quality Award program under section
10 17 of the Stevenson-Wydler Technology Innovation Act of
11 1980 (15 U.S.C. 3711a)—

12 (1) \$5,400,000 for fiscal year 2006;

13 (2) \$5,535,000 for fiscal year 2007;

14 (3) \$5,674,000 for fiscal year 2008; and

15 (4) \$5,815,000 for fiscal year 2009.

16 (c) CONSTRUCTION AND MAINTENANCE.—There are
17 authorized to be appropriated to the Secretary of Com-
18 merce for construction and maintenance of facilities of the
19 National Institute of Standards and Technology such
20 sums as may be necessary for each of fiscal years 2006
21 through 2009.

22 **SEC. 7. STANDARDS EDUCATION PROGRAM.**

23 (a) PROGRAM AUTHORIZED.—(1) As part of the
24 Teacher Science and Technology Enhancement Institute
25 Program, the Director of the National Institute of Stand-

ards and Technology shall carry out a Standards Education program to award grants to institutions of higher education to support efforts by such institutions to develop curricula on the role of standards in the fields of engineering, business, science, and economics. The curricula should address topics such as—

- (A) development of technical standards;
- (B) demonstrating conformity to standards;
- (C) intellectual property and antitrust issues;
- (D) standardization as a key element of business strategy;
- (E) survey of organizations that develop standards;
- (F) the standards life cycle;
- (G) case studies in effective standardization;
- (H) managing standardization activities; and
- (I) managing organizations that develop standards.

(2) Grants shall be awarded under this section on a competitive, merit-reviewed basis and shall require cost-sharing from non-Federal sources.

(b) SELECTION PROCESS.—(1) An institution of higher education seeking funding under this section shall submit an application to the Director at such time, in such manner, and containing such information as the Director

1 may require. The application shall include at a min-
 2 imum—

3 (A) a description of the content and schedule
 4 for adoption of the proposed curricula in the courses
 5 of study offered by the applicant; and

6 (B) a description of the source and amount of
 7 cost-sharing to be provided.

8 (2) In evaluating the applications submitted under
 9 paragraph (1) the Director shall consider, at a min-
 10 imum—

11 (A) the level of commitment demonstrated by
 12 the applicant in carrying out and sustaining lasting
 13 curricula changes in accordance with subsection
 14 (a)(1); and

15 (B) the amount of cost-sharing provided.

16 (c) AUTHORIZATION OF APPROPRIATIONS.—There
 17 are authorized to be appropriated to the Secretary of Com-
 18 merce for the Teacher Science and Technology Enhance-
 19 ment Institute program of the National Institute of Stand-
 20 ards and Technology—

21 (1) \$773,000 for fiscal year 2006;

22 (2) \$796,000 for fiscal year 2007;

23 (3) \$820,000 for fiscal year 2008; and

24 (4) \$844,000 for fiscal year 2009.

1 **SEC. 8. AUTHORIZATION OF APPROPRIATIONS.**

2 (a) MANUFACTURING EXTENSION PARTNERSHIP
3 PROGRAM.—There are authorized to be appropriated to
4 the Secretary of Commerce, or other appropriate Federal
5 agencies, for the Manufacturing Extension Partnership
6 program under sections 25 and 26 of the National Insti-
7 tute of Standards and Technology Act (15 U.S.C. 278k
8 and 278l)—

9 (1) \$110,000,000 for fiscal year 2006, of which
10 not more than \$4,000,000 shall be for the competi-
11 tive grant program under section 25(e) of such Act
12 (15 U.S.C. 278k(e));

13 (2) \$115,000,000 for fiscal year 2007, of which
14 not more than \$4,100,000 shall be for the competi-
15 tive grant program under section 25(e) of such Act
16 (15 U.S.C. 278k(e));

17 (3) \$120,000,000 for fiscal year 2008, of which
18 not more than \$4,200,000 shall be for the competi-
19 tive grant program under section 25(e) of such Act
20 (15 U.S.C. 278k(e)); and

21 (4) \$125,000,000 for fiscal year 2009, of which
22 not more than \$4,300,000 shall be for the competi-
23 tive grant program under section 25(e) of such Act
24 (15 U.S.C. 278k(e)).

25 In any fiscal year for which appropriations are
26 \$106,000,000 or greater, none of the funds appropriated

1 pursuant to this subsection shall be used for a general re-
 2 competition of Centers established under section 25 of the
 3 National Institute of Standards and Technology Act (15
 4 U.S.C. 278k).

5 (b) COLLABORATIVE MANUFACTURING RESEARCH
 6 PILOT GRANTS PROGRAM.—There are authorized to be
 7 appropriated to the Secretary of Commerce for the Col-
 8 laborative Manufacturing Research Pilot Grants program
 9 under section 33 of the National Institute of Standards
 10 and Technology Act—

- 11 (1) \$10,000,000 for fiscal year 2006;
- 12 (2) \$10,000,000 for fiscal year 2007; and
- 13 (3) \$10,000,000 for fiscal year 2008.

14 (c) FELLOWSHIPS.—There are authorized to be ap-
 15 propriated to the Secretary of Commerce for Manufac-
 16 turing Fellowships at the National Institute of Standards
 17 and Technology under section 18(b) of the National Insti-
 18 tute of Standards and Technology Act, as added by section
 19 4 of this Act—

- 20 (1) \$1,500,000 for fiscal year 2006;
- 21 (2) \$1,750,000 for fiscal year 2007;
- 22 (3) \$2,000,000 for fiscal year 2008; and
- 23 (4) \$2,250,000 for fiscal year 2009.

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